

**METHOD AND APPARATUS FOR MOBILE RADIO
VELOCITY ESTIMATION**

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ABSTRACT OF THE INVENTION

A mobile radio velocity estimation system (100) includes an autocorrelation block (106) that determines the autocorrelation of a received signal (104) using one
10 lag (102). A power determination block (108) determines the power of the received signal (104) and a divider block (114) divides the autocorrelation (110) by the power (112). Using a Bessel function lookup table (116) and a multiplication by λ/τ block (118), an estimate (120) for the mobile radio's velocity can be calculated. A method for estimating the velocity of a mobile radio (500) is also discussed.